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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,126	02/04/2004	Robert L. Jones	026196.50382	4283
28172	7590	03/25/2005	EXAMINER	
BUTLER, SNOW, O'MARA, STEVENS & CANNADA PLLC			BUSHEY, CHARLES S	
6075 POPLAR AVENUE			ART UNIT	
SUITE 500			PAPER NUMBER	
MEMPHIS, TN 38119			1724	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,126

Applicant(s)

JONES ET AL

Examiner

Scott Bushey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9 and 11-18 is/are rejected.
- 7) ☒ Claim(s) 5, 10, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3-22-04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 6-8, and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lisi (Figs. 1-3; col. 2, lines 33-37).

It should be noted that the disclosed compressor of the reference is considered to anticipate applicant's claimed blower means. Also, with respect to instant claim 6, the open inlet and outlet ends (6a,6b) of the mixing tube (6) of the reference are considered to anticipate applicant's claimed plurality of openings.

3. Claims 1-3, 6, 8, 9, and 14-17 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ruzicka et al (Fig. 20; paragraphs [0149], [0155] and [0158]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-4, 6, and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Speece.

Speece (Fig. 1; col. 2, lines 4-22) teaches applicant's invention as recited by instant claims 1-4, 6, and 8, except for the specific recitation that the gas input through the diffuser (34) is supplied by a "blower". The reference does disclose that the gas may be supplied by any suitable source and appears to illustrate a compressor type blower means at (30) in Figure 1 of the reference drawings. In any event, even if applicant cannot agree that the reference anticipates applicant's blower means, it would have been obvious to an artisan at the time of the invention, to utilize such conventional gas conveying means, as a compressor type blower means, in view of the entire disclosure of the reference taken in light of the general knowledge of one having ordinary skill in the art at the time of the invention.

7. Claims 2, 9, 11, 12, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lisi taken together with either Bood or Cramer et al.

Lisi (Figs. 1-3; col. 2, lines 33-37) as applied above substantially discloses applicant's invention as recited by instant claims 2, 9, 11, 12, and 14-18, except for the diffuser on the outlet

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end of the mixing tube, as recited by instant claim 2, the apparatus being mounted on a floatable frame, as recited by instant claims 9, 11, 12, and 14-17, and the specifically claimed oxygen transfer rate, as recited by instant claim 18.

Bood (Fig. 1) and Cramer et al (Fig. 3) each alternatively disclose gas-liquid mixing apparatus similar to that of Lisi, wherein the outlet end of the mixing tubes of each secondary reference is flared relative to the mid-section of the mixing tubes, and each secondary reference also teaches attaching the apparatus to a floatable frame, such that the apparatus could be used within a large body of water, such as a lagoon. It would have been obvious to an artisan at the time of the invention, to modify the mixing tube shape of the primary reference, to include a flared outlet end, in view of either of the alternative secondary references, since such would provide slowing of the exit stream, thereby allowing for greater residence time for the gas within the body of the liquid. Furthermore, it would have been obvious to an artisan at the time of the invention, to mount the apparatus as taught by the primary reference, on a floatable frame, in view of either of the alternative reference teachings, since such would allow for use of the apparatus within a large body of water, such as a lagoon. Lastly, with respect to the claimed oxygen transfer rate, such would have been an obvious result of routine experimentation with the known prior art. With respect thereto, applicant should note that the Court stated in *In re Rau*, 117 USPQ 215, "It is well settled that a patent cannot be granted for an applicants discovery of a result, even though it may be unexpectedly good, which would flow logically from the teaching of the prior art."

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Allowable Subject Matter

8. Claims 5, 10, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is (571) 272-1153. The examiner can normally be reached on Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Scott Bushey
Primary Examiner
Art Unit 1724


3-21-05

csb
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